

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (cancelled)

Claim 2 (cancelled)

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5 (cancelled)

Claim 6 (cancelled)

Claim 7 (cancelled)

Claim 8 (cancelled)

Claim 9 (cancelled)

Claim 10 (cancelled)

Claim 11 (cancelled)

Claim 12 (cancelled)

Claim 13 (currently amended): A method for constructing an inductive write element structure for use in a magnetic data recording system, comprising ~~the steps of~~:

- [[a.]] forming a first magnetic pole of a magnetic material;
- [[b.]] depositing a first insulation layer;
- [[c.]] depositing a layer of dielectric write gap material;
- [[d.]] forming an electrically conductive coil;
- [[e.]] depositing a second insulation layer;
- [[f.]] curing said second insulation layer;
- [[g.]] sputter depositing a thin layer of high magnetic moment material;
- [[h.]] patterning a second pole;
- [[i.]] plating a magnetic material in the pattern of said second pole; and
- [[j.]] performing a first ion milling process, to remove at least a portion of the sputtered, high magnetic moment material not covered by the plated second pole.

Claim 14 (currently amended) ~~A method for constructing an inductive write element as recited in~~
The method of claim 13, further comprising, after forming the first magnetic pole the steps
of:

- [[a.]] sputter depositing a layer of a high magnetic moment material onto said first pole;
- [[b.]] masking the high magnetic moment material sputter deposited onto first pole in a pattern corresponding to a pedestal to be formed on an end of the first pole; and
- [[c.]] etching to remove said sputter deposited high magnetic moment material not covered by said mask to form said pedestal.

Claim 15 (currently amended) ~~A method for constructing an inductive write element as recited in~~

The method of claim 14, further comprising the steps of:

- [[a.]] depositing a mask on said plated magnetic material forming said second pole, said mask being disposed at an end of said second pole;
- [[b.]] performing a second ion milling process to remove a portion of said second pole at said end;
- [[c.]] performing a reactive ion etching process to remove a portion of said dielectric write gap material layer; and
- [[d.]] performing a third ion milling process to remove a material from said pedestal.

Claim 16 (currently amended) ~~A method for constructing an inductive write element as recited in~~

The method of claim 14, further comprising, following depositing the first insulation layer, the step of polishing said first insulation layer using a chemical mechanical polishing process.

Claim 17 (currently amended) ~~A method for constructing an inductive write element as recited in~~

The method of claim 13 wherein sputter depositing the [[said]] high magnetic moment material is sputter-deposited comprises sputter depositing FeXN, X being selected from the group of materials consisting of Rh, Ta, Al, Ti, and Zr.

Claim 18 (currently amended) ~~A method for constructing an inductive write element as recited in~~

The method of claim 17 wherein sputter depositing the [[said]] high magnetic moment material comprises sputtering a lamina of FeX_n and further comprises depositing a lamina [[includes lamination layers]] of a cobalt based ferromagnetic amorphous alloy.

Claim 19 (currently amended) ~~A method for constructing an inductive write element as recited in~~

The method of claim 18 wherein depositing the cobalt based ferromagnetic amorphous alloy comprises depositing [[said lamination layers are]] Co₉₀Zr₉Cr.

Claim 20 (cancelled)

Claim 21 (new): The method of claim 17 wherein depositing FeX_n comprises depositing Rh.

Claim 22 (new): The method of claim 17 wherein depositing FeX_n comprises depositing Ta.

Claim 23 (new): The method of claim 17 wherein depositing FeX_n comprises depositing Al.

Claim 24 (new): The method of claim 17 wherein depositing FeX_n comprises depositing Ti.

Claim 25 (new): The method of claim 17 wherein depositing FeX_n comprises depositing Zr.

Claim 26 (new): The method of claim 13 wherein plating the second pole magnetic material comprises plating a Ni-Fe alloy.

Claim 27 (new): The method of claim 13 wherein plating the second pole magnetic material comprises plating to a material thickness about 2μm.

Claim 28 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises sputter depositing FeX_N, X being selected from the group of materials consisting of Rh, Ta, Al, Ti, and Zr.

Claim 29 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises sputter depositing a lamina of FeX_n, and further comprises depositing a lamina of a cobalt based ferromagnetic amorphous alloy.

Claim 30 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises sputter depositing a lamina of FeX_n, and further comprises depositing a lamina of Co₉₀Zr₉Cr.

Claim 31 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing Rh.

Claim 32 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing Ta.

Claim 33 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing Al.

Claim 34 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing Ti.

Claim 35 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing Zr.

Claim 36 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises depositing at least one lamina of a high magnetic moment material and at least one lamina of a non-magnetic, dielectric material.

Claim 37 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises depositing at least one lamina of FeXN, wherein X is selected from the group of materials consisting of Rh, Ta, Al, Ti and Zr, and at least one lamina of a non-magnetic, dielectric material.

Claim 38 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises depositing at least one lamina of a high magnetic moment material and at least one lamina of a cobalt based amorphous ferromagnetic alloy.

Claim 39 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material comprises depositing at least one lamina of a high magnetic moment material and at least one lamina of $\text{Co}_{90}\text{Zr}_9\text{Cr}$.

Claim 40 (new): The method of claim 14 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing FeXN , X being selected from the group of materials consisting of Rh, Ta, Al, Ti, and Zr.

Claim 41 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole comprises sputter depositing a lamina of FeXn , and further comprises depositing a lamina of a cobalt based ferromagnetic amorphous alloy.

Claim 42 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole further comprises depositing a lamina of $\text{Co}_{90}\text{Zr}_9\text{Cr}$.

Claim 43 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole comprises depositing Rh.

Claim 44 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole comprises depositing Ta.

Claim 45 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole comprises depositing Al.

Claim 46 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole comprises depositing Ti.

Claim 47 (new): The method of claim 40 wherein sputter depositing the high magnetic moment material onto the first pole comprises depositing Zr.

Claim 48 (new): The method of claim 14 wherein said pedestal comprises forming a laminate comprising at least one lamina of a high magnetic moment material and at least one lamina of a non-magnetic, dielectric material.

Claim 49 (new): The method of claim 14 wherein said pedestal comprises forming a laminate comprising at least one lamina of FeXN, wherein X is selected from the group of materials consisting of Rh, Ta, Al, Ti and Zr, and at least one lamina of a non-magnetic, dielectric material.

Claim 50 (new): The method of claim 14 wherein said pedestal comprises forming a laminate comprising at least one lamina of a high magnetic moment material and at least one lamina of a cobalt based amorphous ferromagnetic alloy.

Claim 51 (new): The method of claim 14 wherein said pedestal comprises forming a laminate comprising at least one lamina of a high magnetic moment material and at least one lamina of $\text{Co}_{90}\text{Zr}_9\text{Cr}$.